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July 21, 1947

Dr. Wright Langham
Post Office Box 1663
Los Alamos, New Mexico

Dear Wright:

Classification Cancelled

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By Authority Of Rev. of Classification

By S.K. Hartsock, cb Date 5/10/74

I received your letters of July 13 and July 15 with regard to the H-P work. I think the data on H-P-4 are very interesting. Our renal function studies show that while the kidneys were excreting water and electrolytes, the glomerular filtration was very low, there was nitrogen retention and reduced renal plasma flow. The actual results were as follows on 26 March 1947:

	Normal Women
Glomerular Filtration	17.1 ml/min
Renal Plasma Flow	44.5 ml/min
Maximum Tubular Secretory Capacity	2.8 mg
Nan Protein Nitrogen of Blood	64 mg

Two possibilities suggest themselves to me:

(a) Plutonium complexed in the blood stream with globulin does not ordinarily pass the glomerular filter. In this case the filter was severely damaged and the globulin complex leaked through to be excreted in the urine.

(b) Plutonium complex escapes through the glomerulus of healthy kidneys but is taken up again as it passes through the tubules, in other words, plutonium is mostly re-absorbed as are chlorides for example. Of the two I should be inclined to favor (a).

You may recall that I was very anxious to do some studies on a man with nephritis who had marked proteinuria. I still think that this should be done although there is no chance of getting at it under our present restrictions. Of course this may not be a renal effect at all. You are dealing here with an extraordinarily abnormal individual and it may be that we have run into something similar to what I was afraid we might encounter if we based our work on tumor patients.

According to current theory this girl should have had much less than the normal amount of osteoid in her bones - if that is where plutonium goes possibly it maintained a higher level in the plasma because less was fixed in the skeleton.

I have two sets of meetings to attend in October so I don't know whether it will be possible to go to Oakridge. Perhaps it will if the dates do not conflict.

Sincerely yours,

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Samuel E. Bassett

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